

508 Asphalt Emulsion Quality Management Plan

508.1 Introduction

The Asphalt Emulsion Quality Management System (AEQMS) is intended to provide the Utah Department of Transportation with a quality assurance program for Cationic and Anionic Slow, Medium, and Quick Setting Asphalt Emulsions and Asphalt Rejuvenating Agents: type B,C, and D by establishing qualified sources of these materials and verifying the compliance of materials shipped from these sources with specification requirements. The AEQMS does not include Asphalt Emulsions used for Chip-Seal applications.

508.2 Procedures for the establishment of a qualified supplier of liquid asphalts.

508.2.1 The producer will request their producing plant be designated a qualified source by submitting a letter certifying they maintain a quality control program for the plant and that each grade of emulsion to be utilized meets the current AASHTO M-140 and M- 208 and/ or applicable UDOT specification requirements. Producers of Type B modified rejuvenating agents shall also certify that the base stock used in it's manufacture contains a minimum of 15 % by weight of Gilsonite ore. The letter requesting qualification as a source shall be signed by a representative of the producer having legal authority to bind the company. The letter will give the name, position, address, and telephone number of an individual at each production location who may be contacted for data, shipping information, and to whom reports of tests shall be directed.

508.2.2 The producer requesting status as a qualified source agrees to provide UDOT with the following:

- 508.2.2.1 A brief outline of the procedures used to evaluate the finished product, and an outline of the sampling and testing frequency.
- 508.2.2.2 Evidence that the laboratory that produced the quality control test data is inspected on each inspection tour of the AASHTO Materials Reference Laboratory (AMRL) by submission of the inspection report or reports.
- 508.2.2.3 The results of all tests specified by AASHTO M-140, M-208 and/ or applicable UDOT specifications on the most recent 20 samples (10 pairs) tested per grade manufactured shall be submitted in a format that includes: Test data, calculated critical limits for each property, and prepared quality history charts. The quality history charts shall be updated yearly and submitted along with new critical limits
- 508.2.2.4 Data on the most recent 10 pairs as described in paragraph 508.2.2.3 every six months.
- 508.2.2.5 A copy of the quality control plan

508.3 Acceptance of a producer as a qualified source.

508.3.1 UDOT's Asphalt Specialist Engineer will evaluate the information and data submitted as outlined. A determination from this evidence that an acceptable quality history and hence a quality control program exists will be the basis for acceptance as a qualified source.

508.3.2 The producer will be advised in writing of acceptance. An updated list of emulsion producers indicating the grades of asphalt emulsion for which each is qualified will be maintained by the UDOT Asphalt Specialist Engineer and made available to authorized agencies and producers.

508.4 Removal of a producer from the qualified source list.

508.4.1 A producing plant may be removed from the list of qualified sources for a grade of emulsion if results of UDOT tests of any two consecutive samples, from the producing plant, of that grade fails to conform with any specification property or if an individual project sample fails to meet the requirements of the project specifications.

508.4.2 A producing plant may also be removed for failure to submit data every six months as described in 508.2.2.4.

508.4.3 Before removing a plant from the list of qualified sources UDOT will take appropriate measures to confirm the validity of

the sampling procedures and the representativeness of the sample or samples that yielded the results. UDOT will confer with the producer.

- 508.4.4 The producer will be advised immediately by telephone. The action will be documented by written notice of the removal. Test data or field performance data or both will be provided to indicate the cause of the action.

508.5 Procedures for reinstatement to a qualified list.

Once a plant is removed from the qualified list as a source of a grade of emulsion, a producer may gain reinstatement in the following manner:

- 508.5.1 Submit a written request to the UDOT Engineer for Materials, requesting such action.

This request shall present reasons why it is anticipated that the circumstances that led to removal will not recur.

- 508.5.2 If requested, provide UDOT with samples of current production for test and evaluation.

- 508.5.3 If the data provided in paragraphs 508.5.1 and 508.5.2 indicate that the reasons that led to removal are not expected to recur, UDOT will reinstate the plant to the list of qualified sources of that grade of emulsion.

508.6 Inspection of producer facilities.

The plant and terminal facilities of a producer participating in this program will be visited monthly during production of emulsion, by a representative of UDOT to review procedures employed, project requirements, product quality history charts and provide guidance in the functional procedures of the program. Specifically, the quality history charts for emulsified Type B Modified Rejuvenating Agent shall include the following: weight of Gilsonite used as reflected by supplier bills of lading, base stock batch number, corresponding emulsion batch numbers made from the base stock, test results, quantities of base stock and emulsion made. These quantities must reflect that a minimum of 15% Gilsonite by weight of the base stock was used in the manufacture of Type B Modified Rejuvenating Agent. These visits will be conducted to promote better understanding and good working relationships between the laboratory and the producer company officials and to afford the laboratory an opportunity to maintain knowledge of production and storage facilities of the producing plant.

The visiting UDOT inspector shall take one sample of each grade of emulsion being supplied at the time of the visit. The producer will split the sample. UDOT and the producer will compare results. The producer's test results shall be provided to the UDOT inspector within 48 hours after the split is made. Failure of the producer to conform with AASHTO M-140 and M-208 and/ or applicable UDOT specifications, or this procedure shall disqualify the producer.

508.7 Samples

Emulsions from a qualified source delivered to the project site may be sampled at any time by a representative of UDOT and forwarded to the Materials Division for testing. Samples shall be sent to the Materials Division in sealed, one-quart plastic bottles and identified as follows:

1. Project name and number
2. Source of emulsion (manufacturer)
3. Bill of lading number
4. Grade and specification
5. Date delivered to project
6. The problem, if any, for the check/test sample shall be described.

The procedures for taking project samples will be in accordance with AASHTO T-40 to insure that the material submitted to UDOT represents material shipped from the qualified source.